Contract # 64B27

#### <u>NOTES</u>

Bar splicer assemblies shall be of an approved type and shall develop in tension at least 125 percent of the yield strength of the lapped reinforcement bars.

Splicer rods shall be of minimum 60 ksi yield strength, threaded or coiled full length. All reinforcement bars shall be lapped and tied to the splicer rods or dowel bars.

Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars.

Other systems of similar design may be submitted to the Engineer for approval. Approval shall be based on certified test results from an approved testing laboratory that the proposed bar splicer assembly satisfies the following requirements:

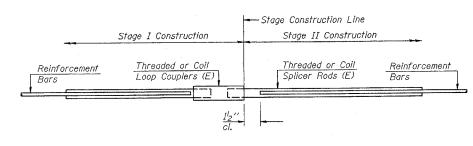
(Tension III kips)
Minimum \*Pull-out Strength = 1.25 x  $fs_{allow}$  x  $A_t$ (Tension in kips)

Where fy = Yield strength of lapped reinforcement bars in ksi.

 $fs_{allow}$  Allowable tensile stress in lapped reinforcement bars in ksi (Service Load) A<sub>t</sub> = Tensile stress area of lapped reinforcement bars. \* = 28 day concrete

	. BAR SPLIC	ER ASSEMBLI	ES			
Bar Size to be Spliced	Splicer Rod or Dowel Bar Length	Strength Requirements				
			Min. Pull-Out Strength kips - tension			
#4	1'-8''	14.7	5.9			
#5	2'-0"	23.0	9.2			
#6	2'-7"	33.1	13.3			
#7	3′-5″	45.1	18.0			
#8	4'-6''	58.9	23.6			
#9	5'-9"	75.0	30.0			
#10	7′-3′′	95.0	38.0			
#11	9'-0"	117.4	46.8			

Bar splicer assemblies shall be according to Section 508 of the Standard Specifications, except as noted. The furnishing and installation of bar splicer assemblies will be measured and paid for at the contract unit price each for "BAR SPLICERS."



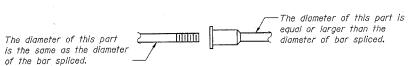
# STANDARD

Bar Size	No. Assemblies Required	Location		
#4	147	Deck		
#5	6	Deck Bm Blockout		
#5	4	South Abutment		
#5	4	North Abutment		

BAR SPLICER ASSEMBLY DETAILS

IL. RTE. 78 OVER PLUM RIVER F.A. 642 SECTION (10BR-3)D & 11BR-8 JO DAVIESS COUNTY STA. 318+36.71 STRUCTURE NUMBER 043-0040

DATE : 12-21-05



ROLLED THREAD DOWEL BAR

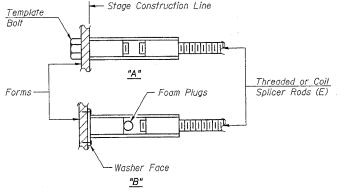
\*\* ONE PIECE

-- Wire Connector

WELDED SECTIONS

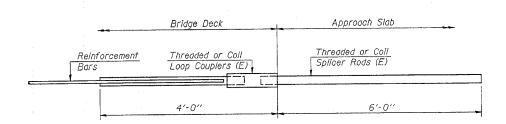
### BAR SPLICER ASSEMBLY ALTERNATIVES

\*\* Heavy Hex Nuts conforming to ASTM A 563, Grade C, D or DH may be used.



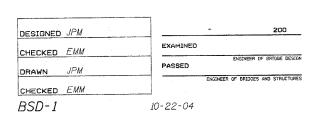
### INSTALLATION AND SETTING METHODS

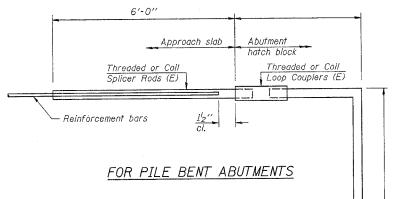
"A": Set bar splicer assembly by means of a template bolt. "B" : Set bar splicer assembly by nailing to wood forms or cementing to steel forms. (E): Indicates epoxy coating.



## FOR INTEGRAL OR SEMI-INTEGRAL ABUTMENTS

Bar Splicer for #5 bar							
Min.	Capacity	= 23.	O kip	s -	tensi	on	
Min.	Pull-out	Streng	th =	9.2	kips	-	tension
No.	Required	_					





Bar Splicer for #5 bar Min. Capacity = 23.0 kips - tension Min. Pull-out Strength = 9.2 kips - tension No. Required = 70